

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1- 17 (cancelled)

Claim 18 (previously presented): A process for preparing a metal workpiece for arc welding, said process comprising depositing at least one layer of an alloy onto a matrix, wherein:

- (a) said alloy comprises copper and at least about 1.0% tin by weight;
- (b) said matrix comprises at least one brazed zone; and
- (c) said brazed zone comprises copper and phosphorus.

Claim 19 (cancelled)

Claim 20 (previously presented): The process according to Claim 18, wherein said copper/tin alloy comprises at least about 1.05% tin by weight.

Claim 21 (previously presented): The process according to Claim 20, wherein said copper/tin alloy comprises at least about 1.2% tin by weight.

Claim 22 (previously presented): The process according to Claim 21, wherein said copper/tin alloy comprises less than about 10% tin by weight.

Claim 23 (previously presented): The process according to Claim 22, wherein said copper/tin alloy ranges from about 2% to about 8% tin by weight.

Claim 24 (previously presented): The process according to Claim 23, wherein said copper/tin alloy ranges from about 3% to about 6% tin by weight.

Claim 25 (previously presented): The process according to Claim 18, wherein said copper/tin alloy comprises at least about 80% copper by weight.

Claim 26 (previously presented): The process according to Claim 25, wherein said copper/tin alloy comprises at least about 90% copper by weight.

Claim 27 (previously presented): The process according to Claim 18, wherein said copper/tin alloy comprises less than about 1% phosphorus by weight.

Claim 28 (previously presented): The process according to Claim 18, wherein several copper/tin alloy layers are deposited.

Claim 29 (previously presented): The process according to Claims 18, wherein deposition of said layers comprise the steps of:

- (a) preheating the alloy zone to be coated;
- (b) supplying and melting copper/tin alloy via an electric arc; and
- (c) depositing said melted alloy in the preheated alloy zone.

Claim 30 (previously presented): The process according to Claim 29, wherein said preheating is carried out by using at least one electric arc.

Claim 31 (previously presented): The process according to Claim 30, wherein said arc is generated by a TIG or a plasma welding torch.

Claim 32 (previously presented): The process according to Claim 29, wherein said copper/tin alloy is supplied in the form of a wire.

Claim 33 (previously presented): The process according to Claim 29, wherein said melting is generated by at least one MIG or TIG welding torch.

Claim 34 (previously presented): The process according to Claim 18, wherein said at least one layer of copper and tin alloy has a phosphorus solubility limit that ranges from about 0.1% to about 3.5% by weight at the solidification temperature.

Claim 35 (previously presented): The process according to Claim 18, wherein said brazed matrix is supported by a stack of several plates separated by fins forming spacers between the plates, said fins and plates being brazed to one another so as to form said brazed matrix.

Claim 36 (previously presented): The process according to Claim 35, wherein said workpiece comprises copper or stainless steel.

Claim 37 (previously presented): The process according to Claim 35, wherein the brazed matrix is part of a brazed copper heat exchanger and the workpiece is at least one fluid collecting and distributing container.

Claim 38 (previously presented): The process according to Claim 37, wherein said collecting and distributing container comprises copper.

Claim 39 (currently amended): A process for manufacturing a copper heat exchanger comprising at least one collecting and distributing container that comprises the steps of:

- (a) providing at least one collecting and distributing container,
- (b) providing a copper heat exchanger comprising a brazed matrix supported by a stack of several plates separated by fins forming spacers between said plates, at least one layer of an alloy containing copper and tin being deposited on at least part of the brazed matrix, said copper/tin alloy comprising at least 1.0 weight % of tin, said brazed matrix comprising copper and phosphorous phosphorus, and
- (c) welding said container to said at least one layer of the brazed matrix.

Claim 40 (cancelled)

Claim 41 (cancelled)

Claim 42 (previously presented): The process according to Claim 39, wherein said fluid collecting and distributing container comprises copper or stainless steel.

Claim 43 (cancelled)

Claim 44 (cancelled)

Claim 45 (cancelled)

Claim 46 (previously presented): The process according to Claim 39, wherein said copper/tin alloy comprises tin in an amount selected from the group consisting of:

- (a) at least about 1.05% tin by weight;
- (b) at least about 1.2% tin by weight;
- (c) less than about 10% tin by weight;
- (d) about 2% to about 8% tin by weight; and

- (e) about 3% to about 6% tin by weight.

Claim 47 (previously presented): The process according to Claim 35, wherein said matrix and/or said workpiece is a component of a fluid collecting and/or distributing container that forms part of a heat exchanger.

Claim 48 (withdrawn): A heat exchanger comprising a brazed matrix supported by a stack of several plates separated by fins forming spacers between said plates, at least one layer of an alloy containing copper and tin being deposited on at least part of the brazed matrix, said copper/tin alloy comprising at least 1.0 weight % of tin, and further comprising at least one collecting and distributing container welded on said at least one layer of the brazed matrix.

Claim 49 (withdrawn): A heat exchanger according to claim 48, which is made of copper.

Claim 50 (previously presented): A method which may be used for welding a metal workpiece onto a brazed zone, said method comprising:

- a) creating a brazed zone on a first workpiece, wherein said brazed zone comprises a copper / phosphorus alloy;
- b) depositing at least one additional layer onto at least part of said brazed zone, wherein:
 - 1) said additional layer comprises a copper / tin alloy; and
 - 2) said copper / tin alloy comprises at least about 1.0 % tin by weight; and
- c) welding a second workpiece to said additional layer, wherein said additional layer protects said brazed zone during said welding.

Claim 51 (withdrawn): An apparatus which may be used as a heat exchanger, said apparatus comprising:

- a) at least one fluid distributing and collecting container;
- b) at least one intermediate material, wherein:
 - 1) said intermediate material comprises a copper / tin alloy;
 - 2) said copper / tin alloy comprises at least about 1.0% tin by weight; and
 - 3) said collecting container is welded to said intermediate material; and
- c) a matrix, wherein:
 - 1) said matrix comprises a plurality of plates separated by a plurality of fins;
 - 2) said plates and said fins are brazed together in at least one brazed zone;
 - 3) said brazed zone comprises a copper / phosphorous alloy; and
 - 4) said intermediate material is deposited over said brazed zone.